

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Rycharde Jeffery Hawkes, et al.

Serial No.: 10/695,549

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Confirmation No. 5467

Group Art Unit: 2121

Examiner: Stevens, Thomas H.

Docket No. 30018432-2

For: Simulation at Two Different Levels of Complexity

Proposed Amendments

Examiner Stevens:

Pursuant to our telephone conversation, enclosed is a claim listing with amendments correcting various informalities.

Regards,

/Charles W. Griggers/

Charles W. Griggers
Reg. No. 47,283

LISTING OF CLAIMS

The following is a copy of Applicants' claims that identifies language being added with underlining (" ") and language being deleted with strikethrough (""), as is applicable:

1. (Currently Amended) A method of simulating a creature for use in two different complexities of simulation, the method comprising:

utilizing a model of ~~the creature~~ that comprises at least two portions:

a first portion which contains functions for use in both of said two different complexities of simulation; and

a second portion comprising ~~two~~ alternative versions:

a first version for use in one of said two different complexities of simulation, wherein the first version utilizes a neural network; and

a second version for use in the other of said different complexities of simulation,

wherein said first portion comprises a behavior selection mechanism arranged to select the behavior of said creature and said second portion is arranged to execute the selected behavior.

2. (Canceled)

3. (Currently Amended) A method as claimed in claim 1, wherein said behavior selection mechanism is arranged to select the behavior based upon at least one of:

~~the~~ a current behavioral state;

one or more internal state variables of the creature;

~~the~~ an environment surrounding the creature; and

one or more sensory inputs to said creature.

4. (Previously Presented) A method as claimed in claim 1, wherein said behavior selection mechanism consists of a set of mutually exclusive behavioral states.

5. (Currently Amended) A method as claimed in claim 1, wherein the second version is for use in the a less complex of the simulations, and is arranged to approximate the functionality of the first version.

8-7. (Canceled)

8. (Previously Presented) A method as claimed in claim 1, wherein the first version utilizes a three dimensional physical simulation of an animat, and the second version utilizes a parameterized model of the animat to approximate movement.

9. (Currently Amended) A method of simulating activities of a plurality of creatures, the method comprising utilizing at least two modes of simulation:

a first mode arranged to simulate the activities of all of said creatures; and
a second mode arranged to simulate an activity of at least one of said creatures at a more detailed computational level of complexity than said first mode, wherein a model of a creature simulated in both modes of simulation comprises at least two portions:

a first portion which contains functions arranged for use in both of said first, second modes of simulation; and

a second portion comprising two alternative versions, a first version for use in said first mode of simulation, and a second version for use in the second mode when selected for closer inspection of the at least one creature being simulated.

10. (Currently Amended) A method of simulating a process at two different levels of complexity, the method comprising:

utilizing a model that comprises at least two portions:

a first portion which contains functions for use in both of said two different complexities of simulation; and

a second portion comprising two alternative versions:

a first version for use in one of said two different levels of complexities of simulation when selected for closer inspection of the process being simulated; and

a second version for use in the other of said different levels of complexities of simulation, wherein the second version is for use in the a less complex level of the simulations, and is arranged to approximate the functionality of the first version.

11. (Original) A method as claimed in claim 10, further comprising evaluating one or more conditions to determine a result of a rule for selecting which of the two alternative versions of the second portion to use in simulating the process.

12. (Canceled)

13. (Original) A method as claimed in claim 10, wherein the first version utilizes a neural network.

14. (Currently Amended) A simulator device arranged to simulate a creature in two different levels of complexities of simulation, ~~the~~ simulator device being arranged to utilise a model of the creature that comprises at least two portions:

a first portion which contains functions used in both of said two different levels of complexities of simulation; and

a second portion comprising two alternative versions, a first version used in one of said two different levels of complexities of simulation when selected for closer inspection of the process being simulated, and second version used in ~~the~~ other of said different levels of complexities of simulation; wherein the second version is for use in ~~the~~ a less complex of the simulations, and is arranged to approximate the functionality of the first version.